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Industrial Homes, Domestic Factories: the Convergence of Public and Private Space in Interwar Britain

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Browsing through interwar editions of *Industrial Welfare*,¹ a journal which represented the interests of industrial welfare supervisors, one might easily in a moment of lapsed concentration imagine that it was a home and garden journal. Interspersed with articles on sports and timekeeping are numerous pieces extolling the virtues of model companies, illustrated with photographs of factory kitchens, gardens, dining rooms, restrooms and bathrooms. These images of upholstered chairs, artwork, flowers, tablecloths, beds and curtains represent the factory environment not as a site of industrial production but as an idealized middle-class home.

In Britain, this vision of the ‘homely’ factory - a term deployed to connote a sense of coziness and to evoke the atmosphere of the domestic home - was promoted by women factory inspectors, industrial welfare supervisors, companies and advertisers seeking to reconcile modernity with tradition, to imbue mass-produced goods with an individualized hand-crafted aura, and to resolve industrial labor problems. Its origins can be traced back to the nineteenth century, when reformers from a range of social and political persuasions protested that workers had become alienated by the scale of industrial production and the subdivision of the labor process and were manifesting their discontent in disorderly conduct, apathy and industrial “warfare.” Amongst these critics of the factory system of production were John Ruskin and William Morris, pioneers of the Arts and Crafts movement which repudiated the mass-production aesthetic and sought to imbue both labor and its end products with creativity. In his 1853 essay, “The Nature of the Gothic,” published in *The Stones of Venice*, John Ruskin railed against the “degradation of the operative into a machine” whose “fingers measure degrees like cog-wheels.” To avoid social upheaval, Ruskin demanded an end to the mass-production of fripperies, advocating the production and consumption of handcrafted goods, which would constitute a “healthy and ennobling labour” by providing workers with a creative outlet.² In the late Victorian era, as Amy Woodson-Boulton has demonstrated, Ruskin’s critique proved instrumental in the establishment of museums and art galleries. Art reformers believed that art could communicate beauty and morality through the representation of nature and viewed galleries as a rational form of recreation which could tame emotion and calm industrial discontent.³

While Ruskin believed the industrial system of production to be beyond redemption, William Morris outlined his utopian vision of a socialist factory of the future, “a true palace of industry,” which would reincorporate beauty and creativity within industrial production, as he wrote in 1884. Morris’ idealized factory would combine industrial workspace with other facilities and social spaces: a dining hall, a library, a school, and “the highest and most intellectual art, pictures, sculpture” and “gardens as beautiful... as those of Alcinous.”⁴ In practice, Morris found it difficult to reconcile his ideals with business imperatives, operating a division of labor in which most of his workers had no opportunity to exercise their creativity.⁵ In the interwar years, however, as the subdivision of labor processes increased, opportunities to exercise skill and creativity within industrial work diminished and industrial unrest intensified, Morris’ proposed compromise solution to the plight of an alienated

workforce was revived by a relatively new professional group: industrial welfare supervisors.

The roots of this profession stretch back to the nineteenth century, when a handful of companies inaugurated welfare facilities for their employees. The Boots Pure Drug Company, for example, organized works outings from 1888 and employed its first welfare supervisor in 1893.⁶ By the 1910s, lady factory inspectors were praising welfare supervisors, hired to oversee bathroom and messroom arrangements and safeguard the welfare of female employees, for improving the cleanliness, discipline and moral tone of the workplace.⁷ Attempting to reconfigure the factory environment into a domestic space, welfare supervisors in the early twentieth century drew upon new psychological understandings of individual behavior and motivation: they implemented the guise of domesticity to facilitate management rather than to offer workers any of the physical or emotional privacy typically associated with the concept of the domestic interior.⁸ While welfare supervisors discussed the need to rescue the individual worker who had become lost within the vast, dehumanizing industrial system, in practice they hoped to stem the rising tide of “industrial warfare” which characterized the 1910s in particular.⁹ Similar objectives underpinned the expansion of welfare capitalism in America; companies sought to curb industrial hostilities and augment worker loyalty by providing recreational facilities which were built and furnished to represent elite building types.¹⁰ If the work itself could not be humanized as Ruskin had urged, then the working environment would have to be modified to combat the soul-destroying effects of monotonous, repetitive labor, as William Morris had suggested. Modern industry, claimed the *Journal of Industrial Welfare* in 1921:

Has given rise to much human misery and has defaced the beauty of the earth, but we are now finding that none of these things need be. It is possible to give happiness to workers in their toil, and to surround our factories with natural loveliness. It is possible to harmonise work with leisure, and the perfection of machines with the natural impulses and energies of the men and women who attend them.¹¹

The government vigorously promoted the project to domesticate the factory during the First World War, when the need for women’s industrial work ran in tension with the desire to protect the health of the race.¹² By 1915, the emphasis on separate spheres which had characterized the first year of the War, prizing motherhood and home craft for women, had been displaced as attacks on the civilian population and women’s entry into munition factories blurred the boundaries between the home and the front.¹³ While women’s suffrage organizations demanded that women be allowed to serve the country, others expressed anxiety that war work de-feminized women, circulating stories concerning the extravagant spending and immoral behavior of women war workers.¹⁴ By July 1918, the number of women employed in industry had risen to 2,970,600, an increase of almost 800,000 from the figures of July 1914.¹⁵ In response, the Home Office and the Board of Trade instituted the Women’s Employment Committee to consider issues arising out of the mass substitution of women for men, such as housing, transit, canteens and recreation.

In 1915 the Ministry of Munitions appointed the Health of Munition Workers Committee, instructing it “to consider and advise on questions of industrial fatigue, hours of labour, and other matters affecting the personal health and physical efficiency of workers in munitions factories and workshops.”¹⁶ It was necessary, the Committee contended, to study the individual as a member of the community and examine “his home as well as his workplace.”¹⁷ The Ministry of Munitions established a welfare section under Seebohm Rowntree to undertake the executive work arising from the Committee’s recommendations. It sought to secure improved conditions of health and welfare within government controlled factories by encouraging the appointment of welfare supervisors. In response, the

government issued welfare orders mandating the appointment of a welfare supervisor in many factories and established intensive courses to train women to fill these vacancies.¹⁸ During the course of the War, companies appointed approximately 1,000 industrial welfare supervisors to oversee women's working conditions and a further 400 to supervise boy workers.¹⁹ Some of the women who entered the field of welfare supervision had been employed in social work or health care; others had undertaken academic study or were promoted from the factory floor.²⁰ Like the lady factory inspectors, whose suggestions for improvements they implemented, most women welfare supervisors were middle class and sought to exercise control over the working-class women they supervised.²¹ Querying the extent to which participation in war work transformed women's social roles, Deborah Thom concludes that "the factory did not detach women from domesticity: it helped to reproduce a domestic ideology and extend it to the state."²²

Thom suggests that efforts to domesticate the factory were discarded after the War. Her findings coincide with a body of historiography which points to the value placed upon private, domestic home life in this era and emphasizes the resurgence of conservative values in the interwar years and the diminution of women's opportunities.²³ By illustrating how the model of the homely factory persisted into the interwar years, facilitating women's entry into industrial work and blurring the boundaries between private and public life, this article contributes towards recent literature which seeks to refine this interpretation. Outlining the expansion of women's social, recreational, economic and political opportunities, Adrian Bingham has argued that the interwar years saw the articulation of a new modern femininity.²⁴ Selina Todd's research demonstrates how paid employment helped define the identity of young women in the interwar period, when labor force participation rates amongst women aged between fifteen and twenty-four rose from 63 to 69 percent between 1921 and 1931.²⁵ In 1938, just over 55 percent of the female labor force was employed in manufacturing, many in the new consumer goods industries.²⁶ Health advice directed towards these young working women urged a holistic approach to health, advocating exercise, recreation, healthy eating and sensible dress.²⁷ In keeping with these trends, attention shifted from the dangers industrial work posed to women's reproductive health to how the working environment could be manipulated to improve well-being and discipline.²⁸ As state interest in industrial productivity diminished following the cessation of hostilities, a number of companies adopted the model of the homely factory to facilitate the management of their workforce and to advertise their products.

The domestication of the factory represents, however, only one half of the story; over the course of the 1920s and 1930s, a symbiotic relationship developed between domestic and industrial space, dissolving the ideology of separate spheres and the corresponding boundaries between home and work. Within factories, the guise of domesticity simultaneously facilitated the expansion of women's employment within industrial sectors while perpetuating gendered notions of suitable work. Conversely, architects and women's groups, inspired by scientific management and modern production methods sought to rationalize housework, elevate the status of the housewife, and enhance the functionality of the home.²⁹ The growth of home economics and domestic science helped disseminate a scientific approach to cookery and other household tasks, while medical and scientific advice literature urged mothers to raise their children by standardized schedules.³⁰ Architects began to draw on the mass-production aesthetic to outline modernist visions of streamlined, standardized housing, ideas that influenced government committees which advocated a more functional workspace within homes and investigated whether new industrial materials and production processes could transform house building. As housewives began to consume goods which they had formerly produced themselves within the home,³¹ the image of the homely factory helped advertise natural, traditional, "home-made" products.

The representation of the homely factory and industrial home indicates how a conservative modernity and a modernist aesthetic drew together domestic and industrial design in the interwar years. Through an exploration of this convergence, this article traces how the domestic, private virtues stressed at the end of the First World War came into conflict with, and ultimately lost ground to, modernist values. By the 1930s, the domestic Victorian bourgeois interior which had represented the ideal for factories in the early twentieth century was increasingly displaced by a new modernist aesthetic that had taken hold in both home and factory, pointing to an erosion of the boundaries between public and private space.

Domesticating the Factory

Historians analyzing the domestication of institutional environments have explored how architecture and décor have been deployed to embody and shape values and practices. Marta Gutman, for example, has studied how members of the Oakland New Century Club sought to instill gender-specific behavior within working-class men and women by recreating aspects of the middle-class domestic environment within social institutions.³² Pointing to the difficulties of maintaining distinctions between public and private space, Abigail Van Slyck suggests that ladies' reading rooms offered a domestic, feminine refuge within the public space of late nineteenth-century libraries.³³ In her study of early twentieth-century nurses' residences, Annmarie Adams reflects on the shortcomings of isolated typographical analyses, arguing that the "dynamic interplay" between the design of the hospital and nurses' residences pointed to a lack of distinction between institutional and domestic architecture. Spaces designed for women, she argued, tended to embody "a carefully negotiated compromise of private and public space."³⁴

Similar rationales may offer an insight into the replication of homely qualities within factories, a seemingly incongruous phenomenon which challenged the demarcation of domestic, private, familial, feminine space and economic, public, male space that had been established over the course of the nineteenth century. Indeed, Antoine Prost has asserted that for the working classes, boundaries between public and private life were formalized over the course of the twentieth century, evidenced in the differentiation of workspace. Production, Prost argues, moved "from the private sphere into the public... workplace ceased to coincide with living space."³⁵ The home was eulogized as a private space, materializing social, moral and intellectual values, from which paid employment had been banished.³⁶ Interior décor literature of the 1870s and 1880s, influenced by liberal beliefs in self-expression within the private sphere, urged home owners to create an individualized, artistic interior which reflected their soul and could aid self-realization. Yet the mass-production of home furnishings undermined calls to reject earlier standardized schemes of home décor.³⁷

Attempts to domesticate the factory reflected the difficulty of implementing the separate spheres ideology and illustrate how compromises were introduced to reconcile ideology and practice, finding expression in architecture, décor and rhetoric.³⁸ Even in the nineteenth century the boundaries between public and private life, home space and work space, were fluid.³⁹ Annmarie Adams has illustrated that, far from serving as a private refuge from urban turmoil, the Victorian home was experienced as a porous space in which public and private matters connected,⁴⁰ while Moira Donald has observed that "at the very point in history when 'work' began to be defined as something done outside the home, the number of people employed within the home expanded to new heights."⁴¹ The ideological distinctions made between the private sphere of the home and the public sphere of paid work was impracticable for most working-class women, who needed to combine domestic duties with paid labor.⁴² Moreover, a number of families continued to produce goods within their own homes, combining home space and factory space. In 1924 the Trades Union Congress,

concerned with the unsanitary condition of such work spaces, proposed an amendment to bring these “domestic factories” under the remit of the 1901 Factory and Workshop Act.⁴³

Employers introduced aspects of domesticity into their factories in part as a response to the growing number of women employed within industry. In the interwar years, heavy industries such as steel, iron and shipbuilding, largely based in the north of the country, went into decline.⁴⁴ Women came to assume a more visible role within the industrial workforce with the ascendancy of light manufacturing industries, reliant upon mechanization and mass-production methods.⁴⁵ Believing that women constituted a cheaper, more malleable workforce to undertake these semi-skilled industrial processes, companies sought to designate such tasks as women’s work, reconfiguring these new manufacturing plants, in the words of Carol Walkowitz, in accordance with a “working-class female habitus,” defined as clean rather than dirty, light as opposed to heavy and spatially constricted, rather than mobile.⁴⁶ One way to interpret the feminisation of industrial workplaces and the designation of particular forms of industrial employment as women’s work would be to view these developments as evidence of the tenacity of the separate spheres ideology.⁴⁷ However employers, motivated by the attractions of a cheaper workforce, invoked the guise of domesticity to bring women from the domestic sphere into the factory, ultimately undermining the notion of separate spheres. Firms may well have hoped to entice and retain employees by providing modern amenities. In 1929, the Chief Inspector of Factories noted that “welfare arrangements are becoming increasingly necessary if the services of the best type of worker are to be obtained.”⁴⁸ Four years later, one factory inspector reported that welfare facilities, especially mess rooms, had become so widespread throughout industry that complaints were often received regarding their absence in industries where they were not legally required.⁴⁹

The inception and demise of the homely factory can also be plotted within the history of factory architecture, revealing how the development of new construction materials and the ascription of new functions to the factory combined to reshape factory space. The layout of textile mills in the eighteenth and nineteenth centuries was primarily determined by practical considerations; reliance upon natural lighting, for example, restricted the width of mills. By the early twentieth century, industrial engineers sought to enhance the efficiency of industrial production by experimenting with methods for handling materials and directing work flows through the factory. Increasingly, as engineers’ attention turned to how space could be used to manage the human element within the system of production, they advocated open-plan designs which facilitated surveillance and minimized unnecessary worker movement.⁵⁰ With the shift from water to steam power, manufacturers were able to use heavier machinery, thus necessitating larger buildings.⁵¹ The introduction of steel and concrete provided greater strength to buildings, allowing larger windows to be installed and reducing the number of columns necessary for support.⁵² These developments enabled architects to design showpiece model factories as the balance between practical and aesthetic considerations shifted in the interwar years.⁵³ Joan Skinner suggests that the new breed of industrial ‘crystal palaces’, characterized by large windows and exterior art deco styling, served as both sites of production and “commanding advertisements in a competitive world.”⁵⁴

The lady factory inspectors, first appointed in 1893, promoted the ideal of the homely factory, describing isolated initiatives to improve health and welfare through workplace provisions prior to the outbreak of the First World War.⁵⁵ This reflected the gendered division of labor within the Inspectorate; female inspectors examined welfare and workplace hygiene while the male inspectors focused on technical questions such as the fencing of machinery. In 1912, for example, Miss Escreet described how “at two mills recently I found charming dining-rooms. The furniture of one included books, basket chairs, a piano, and a

sewing machine; the other was gaily decorated with paper flowers.”⁵⁶ Efforts to improve factory conditions were, however, hampered by the 1901 Factory and Workshop Act which left legal standards open to interpretation: ventilation and sanitary accommodation were required to be “sufficient” and factories were required to be kept in a “cleanly” state. As former inspector Rose Squire reminisced in her memoir: “it has often been found difficult to convince a bench of justices of the peace that in prosecuting an obdurate employer one was not merely ‘fussy’ or thirsting for an orgy of spring cleaning at his expense.”⁵⁷ Squire’s recollection conveys how the lady factory inspectors sought to forge a role for themselves by extending into the public sphere of the factory the notion of housework, equating the factory to the home, while indicating the resistance they encountered when attempting to reform existing practices. In an era when middle-class women advised working women about cleanliness within their homes, the lady factory inspectors sought to apply the same ideas to the factory.⁵⁸

The emerging profession of industrial welfare supervisors subsequently popularized the model of the domestic factory, using Industrial Welfare as a platform to disseminate good practice. Supervisors insisted that “a workshop no less than a home requires to be kept clean and sweet if it is to fulfil its functions adequately.”⁵⁹ These concerns mirrored contemporary anxieties regarding cleanliness in the home; housewives were urged to keep homes free of germs by utilizing new technological appliances and choosing easy-to-clean surfaces.⁶⁰

During the First World War and in the early 1920s, attempts to adapt the factory environment were often undertaken in a rather ad hoc way. Welfare supervisors carved out small enclaves of domesticity from existing factory space, using pictures, flowers and soft furnishings as shorthand signifiers for domestic space. A feature from 1920 in the Journal of Industrial Welfare on the welfare provisions established by Dr Jaeger’s Woollen Company illustrates these trends. The company established a makeshift canteen in a corridor which linked one department of the works to another, and portioned off a rest room from the welfare supervisor’s office, which was “painted with a pretty cream distemper.” The windows were “hung in the same dainty style as in the canteen. Deep wicker chairs invite the worker to rest for this half hour, and on the tables are magazines, books and games.”⁶¹ Image 1 Similarly, photographs of ambulance and restrooms in the early 1920s suggest that they were simply curtained off from production space; the caption to the photograph of the ambulance room at the engineering firm Mather and Platt featured in Industrial Welfare in 1924 noted that “the large workshop can be seen through the window.”⁶²

Welfare supervisors and their employers sought to domesticate factory space by incorporating spaces whose functions were more typically associated with the upper- and middle-class Victorian home, an architectural model which inscribed the ideology of separate spheres and class distinctions through the provision of separate spaces for men, women and servants.⁶³ A key example was the spread of factory canteens, which duplicated the functions of the domestic kitchen and dining room. There were around 100 factory canteens prior to the outbreak of the First World War and approximately 1,000 by the end of the War.⁶⁴ The Health of Munition Workers Committee viewed canteens as a valuable mechanism through which to ensure the productivity of workers, and wartime factory canteens appear to have been designed with utilitarian considerations in mind, rapidly to serve nutritious food to large numbers of workers. The Committee provided template plans for canteens catering for 400 and 280 diners in 1916, allowing 8 to 10 square feet per diner.⁶⁵ In these plans, a kitchen, containing a scullery area, was flanked by dining rooms for male and female employees. The kitchen adjoined the dining rooms by means of hatches, through which kitchen personnel served hot food and workers returned their dirty crockery directly to the sinks. The Committee advocated temporary buildings as an expedient war-time measure and recommended durable concrete floors. It also took other practicalities into

consideration, suggesting that the serving counter should be situated so as to enable workers to access food without crossing the hall, placing barriers in front of the counter to prevent congestion and gangways between seating to enable workers to take and leave their seats. The Committee did make some aesthetic concessions, suggesting a “pleasant, open outlook and southern aspect,” and recommending a distemper of primrose, duck’s egg green or French grey to give the interior a “clean and cheerful” appearance.⁶⁶ A photograph of a canteen from the Committee’s report suggests that practical considerations predominated, depicting a room devoid of décor aside from a coat of light paintwork covering the upper half of the walls. The concrete floor, identical trestle tables and benches and uniformed workers, queuing behind barriers for counters labeled “soup” and “meat,” conjure an atmosphere redolent of institutional conformity rather than cozy domesticity.⁶⁷ Image 2.

As James Vernon has outlined, factory canteens were intended to discipline workers as well as to meet their nutritional requirements. The factory canteen, explained Edgar Collis and Major Greenwood, functioned as a social institution, in which “workers meet, make friends, and learn to be part of, and take part in, the life of what should be a valuable humanising influence – their industrial home.”⁶⁸ The austere war-time canteens may not have evoked a home-like atmosphere, but the function and design of factory canteens altered once responsibility shifted from the government to individual companies. Although no interwar figures are available, virtually every annual report issued by the Factory Inspectorate commented on the increasing number of factory canteens and in 1934 the Inspectorate reported that in some areas “workers are so used to finding such provision that they think the absence of it is necessarily illegal.”⁶⁹ In the 1920s, *Industrial Welfare* urged employers to build canteens which resembled a domestic dining room, publishing photographs of new canteens in which attempts had been made to shape behavior and create suitably gendered dining spaces. Within upper- and middle-class domestic architecture, the formal dining room was largely a product of the Victorian era. Typically furnished in dark mahogany and decorated with plants and animals, the dining room was gendered as a masculine space.⁷⁰ These aesthetic characteristics are evident in the design of the men’s dining hall at Dalmarnock Electricity Power Station, which *Industrial Welfare* described as conjuring “an atmosphere savouring of home and individual life.”⁷¹ Here, an earlier concrete floor had been replaced with linoleum and the walls were decorated with etchings, wood strapping and a dado painted mahogany color. Some companies established clubhouses or clubrooms to provide recreational spaces for male and female employees. Those provided for male workers tended to draw upon the decorative schemes typical of gentlemen’s clubs and the smoking and billiard rooms of upper-class housing.⁷² The hallway of the clubhouse provided by the Automatic Telephone Manufacturing Co Ltd for its workers was adorned with antlers and featured dark wood carved door frames, panels, and an imposing carved wood staircase.⁷³

Women’s clubrooms were more evocative of the ladies’ boudoir, morning and drawing rooms, often furnished in lighter tones and incorporating chintz, flowers, cushions and mirrors.⁷⁴ A photograph of the girls’ club room provided by the Watford Manufacturing Company, for example, suggests a compromise between domestic and industrial space; no windows are evident, the concrete floor, brickwork walls and pipes are exposed, and a support pillar is in the centre of the frame. Attempts have been made to camouflage these features characteristic of the industrial workplace by draping a curtain over a windowless corner and furnishing the room with assorted wooden chairs, cushions, floral rugs, writing desks, pot plants, pictures and a mirror.⁷⁵ Image 3. Similarly, welfare supervisors sought to fashion a feminine space in girls’ dining rooms through the use of tablecloths and flowers. Dorothea Proud,⁷⁶ author of a prominent work promoting industrial welfare, argued that the environment shaped behavior and could encourage factory girls to behave with decorum. She described “attractive” canteens with comfortable individual seats and small “homelike”

tables, furnished with red and green tablecloths, vases of flowers, books and pictures, creating an atmosphere “quite free from the suggestions of places of toil.”⁷⁷

As new factories were constructed in the 1920s, the practice of establishing canteens and other welfare provisions in underutilized spaces within the factory gave way to the creation of purpose-built spaces or entire blocks, adjacent to the production spaces of the factory, which incorporated a range of welfare facilities. In 1926, for example, *Industrial Welfare* profiled the new club building constructed by the carpet manufacturer James Templeton & Co, which contained a recreation hall, a kitchen and an adjoining dining room for women and girls. Such purpose-built provisions were most commonly found amongst firms with a large female workforce: two thirds of the 3,000 workers employed by Templeton & Co were women.⁷⁸ The new dining block contracted by the confectioner Cadbury in 1920 and completed in 1927 was designed to provide dining accommodation for 4,225 girls and 2,082 men. Positioned between the girls’ recreation ground, the men’s recreation ground and the works buildings, this four-floored building was designed to rationalize the flow of employees between workspace and lunch hour. It centralized catering facilities for the firm’s employees while simultaneously separating out employees by gender and rank.⁷⁹ These spatial distinctions began even before workers set foot inside the buildings and indicate how the movement of female employees was more restricted than that of their male counterparts. Women entered the canteen block at basement level where the girls’ dressing room was located via a fifteen foot wide corridor which linked up to the girls’ departments in the works buildings; men made their way to the block at ground level. After changing, women could make their way upstairs directly into the girls’ dining room. This was supplied by a centrally placed kitchen with serving hatches which also opened into the terrace restaurant and men’s dining room. Further dining rooms were provided for female employees on the first and second floors while directors and senior staff were provided with dining rooms on the second floor. Within each dining room, separate queues for hot, cold and pre-paid meals facilitated rapid service. The block also contained a library, reading room, lecture room, concert hall and lounges, while the dining halls accommodated meetings, classes, dances and rehearsals out of work hours. The medical and dental departments were situated on the lower and ground floors respectively. Image 4.

Industrial Welfare suggested that factories establish restrooms for their female employees. Typically furnished with beds or chaise lounges, curtains and carpets, such rooms recalled the domestic bedroom. Where work was hot or heavy, factory inspectors and welfare supervisors encouraged factories to provide bathrooms to enable their employees to wash before returning home. In 1923, *Industrial Welfare* featured a photograph of a bathroom at the Letchworth factory of the Spirella Company, which manufactured corsets. The photograph depicted a room with gleaming white-tiled walls, a tile floor and a white bath and sink with a porcelain finish, at once hygienic and private.⁸⁰ Image 5 These provisions would have compared favorably to the facilities available within many workers’ homes; a 1918 government report chaired by Sir John Tudor Walters on the construction of working-class housing acknowledged that it would not be feasible in all instances to provide separate bathrooms in new homes. Instead, the Report suggested that a bath could be sited in the scullery alongside the copper, ideally portioned off by walls to offer privacy, thus creating a dual purpose bathroom and washhouse.⁸¹

Parallels can be drawn between the provision of resting spaces for women manufacturing consumer goods and the proliferation of facilities established to meet the needs of the consumers of such goods: bourgeois women on shopping excursions.⁸² If the model of the homely factory sought to recreate aspects of the domestic private sphere in the space of production, the proliferation of tea shops, restaurants, ladies’ lavatories, department stores and women’s clubs similarly recreated a domestic retreat within the sphere of consumption.

Department stores of the late nineteenth and early twentieth centuries were designed and richly furnished to evoke the atmosphere of a grand house, replete with carpeting, draperies and grand staircases.⁸³ Women's clubs, which provided dining rooms, bedrooms, concert halls and lounging rooms, offered fatigued shoppers a cozy, feminine and luxurious retreat or "temporary home;"⁸⁴ their existence demonstrates the merging of public and private space within the city while their demise in the 1930s points to the waning of the separate spheres ideology.

Throughout the factory, writers described how décor could influence the morale and behavior of workers, suggesting cheerful paint schemes to alleviate monotonous work or the oppressive feeling of heavy machinery,⁸⁵ advocating mirrors and flowers and advising that machinery be arranged "with thought to its appearance."⁸⁶ "Some people may question whether it is wise to accustom workers to beauty," wrote Dorothea Proud, "but it will scarcely be denied that beauty will, if permitted, affect their senses."⁸⁷ Evoking Victorian beliefs in the transformative power of art, the *Journal of Industrial Welfare* described the aesthetic appearance of factories and art work displayed within. In 1921, for example, it praised the addition of paintings to the reeling room at the Belgrave Mills in Oldham for increasing worker efficiency, although the overall impression gleaned from the accompanying photograph is one of incongruity; the two large prints appear markedly of place on the haphazardly white-washed walls of an otherwise lackluster workroom. They appear to offer no distraction to the two workers featured in the photograph who seem engrossed in tending their machines.⁸⁸ These innovations point to a belief that the factory environment could be transformed to shape workers' emotional responses. Welfare supervisors sought to invert the idea that the interior of a dwelling projected "its inhabitants' interiority;"⁸⁹ they aimed to manipulate the factory interior to mould the interiority of its inhabitants. Concerns that workers had become alienated cogs in the machine could now – in theory – be redressed through artwork, décor and the inauguration of spaces which facilitated social interaction.

Within the homely factory, industrial welfare supervisors sought to "maternalise" the workplace, acting as a "big sister" towards their "girls."⁹⁰ The factory "family" functioned as a disciplinary construct to mould behavior, maintaining hierarchical relations by ascribing parental roles to managers and supervisors. Such an approach dated back to the paternalistic firms that had been the innovators of industrial welfare in the nineteenth century.⁹¹ An article published in the May 1926 edition of *Industrial Welfare* on the Shredded Wheat factory at Welwyn Garden City referred to the "community spirit" and "Shredded Wheat family."⁹²

The proposed domestication of the factory extended beyond interior transformation; the ideal model "homely" factory would be complemented by its own garden. David Nye has described how the modern American factory was an emblem of technological progress, revered as a sublime industrial object.⁹³ In Britain, technological awe went hand in hand with arcadian pastoralism; as Raymond Williams noted, while the Industrial Revolution transformed the city and the country, "English attitudes to the country, and to ideas of rural life, persisted with extraordinary power."⁹⁴ British firm Cadbury consciously represented its model factory at Bournville as a reinvention of the pastoral idyll, persistently using the image of the 'factory in a garden' in advertising throughout the late nineteenth and early twentieth centuries.⁹⁵ From 1910 onwards, Cadburys issued visitors with a pamphlet, "Bournville: the Factory in a Garden," which advertised the factory in a garden and life in the Bournville factory village. "Situated in one of the healthiest and prettiest parts of Worcestershire," an early edition explained, "everything has been done to beautify the factory and its surroundings."⁹⁶ Cadburys was careful to maintain its pastoral image as it

expanded production facilities, describing in a lecture how “creepers are at once trained up the newly-erected walls, and quickly cover them, giving a homely beauty.”⁹⁷

This paradoxical combination of the industrial and the pastoral found expression in the garden city movement which sought to ease overcrowded living conditions in industrial areas by creating new satellite towns. Garden cities were designed with public services, shopping amenities, housing and places of employment, enabling people to work and live within easy reach of the countryside. Developed and popularized by Ebenezer Howard in his 1898 work To-morrow: A Peaceful Path to Real Reform, the garden city ideal underpinned the founding of Welwyn Garden City in 1919.⁹⁸ In an article written to promote the new Shredded Wheat factory at Welwyn, Constance Kerr, organizer of the Women’s Department of the Industrial Welfare Society, discussed the tendency for companies to discard premises in urban areas. The article referred to “the factory in a garden,” describing the flower beds and lawns surrounding the premises. Designed to introduce a maximum amount of light, Kerr described the factory as “a beautiful structure, looking in the distance as if it had been carved out of white ivory, and with innumerable windows sparkling like diamonds in the sunshine.”⁹⁹

It is difficult to ascertain the prevalence of homely factories as Industrial Welfare never enumerated the model workplaces described within its pages and the overstretched Factory Inspectorate, which struggled to enforce legal requirements in the interwar years, was in no position to monitor the growth of voluntary welfare provisions. Given the virtual absence of interwar data, we can use figures collected by the Factory Inspectorate in response to war-time pressures and new legal requirements to trace the expansion of welfare facilities between the two world wars, while acknowledging that this information camouflages regional variation and fluctuations over the course of the interwar years. This allows us to gauge the prevalence of three features found within the sort of comprehensive industrial welfare publicized within Industrial Welfare: canteens, welfare supervisors and ambulance rooms. Factory canteens increased from 1,000 in 1918 to 5,695 at the end of 1941, a figure which includes a number built after the outbreak of war in 1939.¹⁰⁰ The number of welfare supervisors employed within industry increased marginally from 1,400 during the First World War to 1,500 at the outbreak of the Second World War.¹⁰¹ Over the same time period, the number of factories operating in Britain decreased from 281,191 in 1919 to 238,170 in 1939, reflecting a shift towards larger companies and larger workplaces.¹⁰² Thus, around 2 percent of the operating in Britain in 1939 featured a canteen while 0.6 percent employed a welfare supervisor. These numbers correspond closely to the figure given in 1924 by one manager of the number British firms operating a system of industrial welfare: 1,300.¹⁰³ According to statistics collated at the cessation of the First World War and data gathered while implementing the first aid requirements of the 1924 Workmen’s Compensation Act, the number of factory ambulance rooms increased from 290 in 1919 to 450 in 1925, with a corresponding rise in nursing staff from eighty-five to 109.¹⁰⁴ Given the preponderance of small factories - as late as 1948, 195,000 of the 230,000 factories within Britain employed twenty-five people or less - a higher proportion of industrial workers would have been employed in workplaces featuring these facilities than these figures might suggest, especially in regions where light manufacturing flourished.¹⁰⁵ Other factory owners may well have dabbled with welfarist ideas and sought to add a homely touch to their workplaces by experimenting with color schemes or art work. Nevertheless, these figures indicate that the image of the model factory came to assume a disproportionate prominence.

At the Factory Gate: Boundaries between Home and Work

The industrial welfare movement believed that happier, healthier workers would be more efficient. While measures implemented within the workplace could go some way to

enhancing the “human factor” in industrial production, many welfare supervisors argued that their good work was undermined by workers’ poor living conditions. How could employees perform their work well, they asked, if their home environment was not conducive to health? In the 1920s, a number of companies inaugurated welfare provisions in response to these concerns which traversed the boundaries between the factory and the home: these included facilities offered within the workplace out of work hours such as evening classes, recreational clubs and baths and those which linked the workplace to the home, such as transport, visits to the sick and to the homes of young workers, company housing, holidays and convalescent homes. A spate of workmen’s compensation cases brought to the courts in the 1920s concerning accidents occurring to people travelling to work on company transport, through work premises and in breaks in the working day demonstrate that the question as to when and where work began and ended had become decidedly fuzzy.¹⁰⁶

Some welfare supervisors argued that homely factories could serve as a template to educate factory girls about housekeeping standards. One Lancashire food firm established a class in cookery which was taught in a kitchen at the caretaker’s home.¹⁰⁷ Another factory built a cottage which it hoped “may have an educational influence on the girls’ tastes and ideas of what a better-class workman’s home can be made... the furniture, while not being beyond the reach of a working-man’s purse, is of a much superior style and design to that generally found in working-class homes.”¹⁰⁸ Company housing schemes emerged against a backdrop of labor unrest and became a site in which the expertise of social reformers, welfare supervisors and architects came into conflict.¹⁰⁹ At Penistone, the company village of steel firm Cammell Laird & Co, housing design followed a contradictory aesthetic of individualized mass production: Industrial Welfare described attempts to vary the texture and color of the concrete blocks used to construct the housing. By contributing bricks and slates for the chimneys, porches and roofs, the firm expressed the hope that monotony would be avoided.¹¹⁰ The engineering firm Vickers, mingling homes for working-class and middle-class families in its model village, suggested that this would motivate the working man to ensure that his home and garden did not “disgrace” his surroundings, and that his children “are not to be singled out by dirty faces and untidy clothes from the children of his neighbours.”¹¹¹

Through company housing and home visits, welfare supervisors sought to extend the discipline of the factory into workers’ homes. A series of articles published in Industrial Welfare between 1922 and 1923 claimed that the intervention of welfare supervisors in the home lives of their workers was both effective and legitimate, recalling nineteenth-century philanthropic visitations to working-class homes undertaken by middle-class women, in which inequality had structured the relationship between visitors and visited.¹¹² “An inefficient worker is an extravagance that no employer can afford,” argued one supervisor, explaining how “the home-visitor who expects to find the most ordinary elements of common sense in the homes of workers will, in many instances, be disillusioned.” This unsatisfactory state of affairs was best remedied by providing young factory girls with classes in homemaking skills after factory hours to ensure that “the good training and wholesome influence that have been perhaps so sadly lacking in her own home may come into her life at the factory.”¹¹³ Another supervisor believed that the “tactful and winsome” visiting welfare supervisor could invoke “a latent self-respect in even the most untidy of women, except where every shred of self-respect has been killed by drink and vice.”¹¹⁴ Citing examples of drunken fathers who had “retired” on the wages of their wives, and wage-earning daughters who had been overburdened with excessive household chores, one supervisor expressed the view that girls should be persuaded to leave when home conditions left much to be desired.¹¹⁵ Some welfare supervisors did question the fairness of critiquing the housekeeping standards of working-class women who were obliged to undertake paid labor and domestic chores: one argued that “with a hot bath, a larder, a larger kitchen and

more bedrooms, mothers would have a better chance of obtaining a reward for the character and self-denial that they are now showing in battling with this 'home and factory' problem."¹¹⁶

One way the overstretched housewife could ease her burden of household labor was to purchase domestic appliances and pre-prepared food items. In the interwar years, the formal economy and the domestic economy began to dovetail as the household became an important site of consumption.¹¹⁷ These trends are illustrated within interwar advertisement targeted at the household consumer which featured the image of the homely factory to convey the home-made, healthy character of products, blurring distinctions between home and factory. Long-established garden factories such as the Cadbury factory in Bournville had pioneered advertising in this genre, emphasizing the bucolic charms of their products. An advert for Crosse and Blackwell in 1914 illustrates this trend, describing the "romantic settings" of the firm's factories and detailing welfare initiatives at the factories, including the girls' dining club, swimming club and orchestra. The company justified these facilities partly on the grounds of efficiency, which would become the predominating objective underpinning welfare schemes in the twentieth century, but also on paternalistic grounds, which characterized nineteenth-century welfare initiatives. The article focused on the welfare of female employees, with one director remarking, "men are better able to look after themselves, but girls seem to have such a hard time that it is a pleasure for us to do anything that will brighten things up for them."¹¹⁸

The advertisement counter-posed the image of "a small army of white-coated young women" described as making preserves in an "old-fashioned homemade way" in a room that "may well be taken as a model for the average kitchen." The factory was represented as at once domesticated and paternalistic yet also modern and scientific, mirroring developments in 1920s hospital architecture in which historical styles created a conservative exterior while interior design revealed a "technological fetishism."¹¹⁹ This mixture of the familial, domestic, modern factory environment continued to find expression in the 1920s. Advertisements for Ovaltine, Chivers' Jams and Lyons all promoted the image of idyllic rural factories, well-cared for workers and home-made products.¹²⁰ One typical Ovaltine advertisement from 1926 was headed by an illustration of the new factory the company had commenced building in 1924. Depicted against a backdrop of rolling hills and sited within formal gardens, the large windows and art deco façade of the factory appear unabashedly modern and somewhat at odds with its bucolic surroundings and the horse and cart portrayed in the foreground. Captioned "The Home of Good Health," the advertisement described the beautiful healthy surrounding countryside before focusing on the factory: "the factory itself is the ideal of what a factory should be. Spotlessly clean, full of sunshine and sweet country air, and surrounded by gardens to make a happy and health staff – such is the home of 'Ovaltine'."¹²¹

As these examples demonstrate, many companies sought to embellish their factories for promotional purposes. Musing on this issue, Dorothea Proud criticized the "straining after splendour" evident in the design of new factories, contrasting "entrance halls which suggest amusement or luxury" with poor working conditions and underground workrooms. "Some factory gardens," she argued "certainly have an obtrusiveness which suggests that they concern the public more nearly than the employees."¹²² These developments in factory architecture bring to mind the architecture of public asylums in the nineteenth and early twentieth centuries, which combined the palatial exterior and gardens of a public house with an interior fitting to a poor law institution.¹²³ The contradiction between the interior and exterior of many factories could be explained by a similar duality of purpose: an exterior designed to promote the status of the firm and an interior fitting to industrial toil. Pointing to the emergence of visitor observation galleries in factories, Dorothea Proud argued that the

practice of using the process of manufacture for advertisement had shaped the internal architectural structure of workrooms. The aesthetic design of the Shredded Wheat factory in Welwyn Garden City undoubtedly reflected company strategy. In 1907, 100,000 tourists were given tours of the American Shredded Wheat factory.¹²⁴ Similarly, the design of the new factory at Beeston constructed for the pharmaceutical firm Boots in 1933 integrated visitor-friendly features, creating public pathways through production spaces. A handbook for guides described a route for visits through the factory over gangways, bridges and balconies which enabled visitors to watch various production processes.¹²⁵

While advertisements for food items focused on the domesticated, rural factory and home-made products, advertisements for electricity, gas and domestic appliances tended to emphasize the benefits which could be reaped from adopting the modern technologies employed in factories within the home. The British Commercial Gas Association enticed domestic customers by detailing how a factory was able to turn out 90,000 biscuits per hour in a gas oven. "In the home as in the factory, solid fuel is out of the question where fine variations of heat are required. The home cook needs just those delicate gradations demanded by the large-scale confectioner."¹²⁶ Similarly, an advertisement placed by the British Electrical Development Association stressed the benefits of electric light bulbs. "Factory workers' eyes are looked after by law," it explained. "Wouldn't it be wise to make good lighting a law in your own home?"¹²⁷ An advertisement placed by the Gas Light and Coke Company advised consumers to model their marital relationships within the domestic sphere on modern workplace relationships, informing readers that "in modern life the business man and his wife should be working together as partners in the business of living... your home must be as modern as your office, shop or factory."¹²⁸

Models of the pastoral homely factory thus competed in interwar advertising with images of new modernist factories; the modern housewife, advertisements suggested, would naturally want the same standard of fittings and appliances in her home as was available in modern factories. Modernist factories drew on new architectural styles and building materials to reject the bourgeois domestic aesthetic.¹²⁹ Boots, which had a long pedigree of paternalist welfare work, provides an interesting example of this transition. Its Beeston factory, opened in 1933, was described in press reports as an "industrial crystal palace" and "factory of utopia." Constructed using concrete, the factory provided its workers with ample sources of daylight through large windows. Based around large, open spaces it followed modernist precepts by challenging distinctions between interior and exterior, public and private space.¹³⁰ The modernist factory, like the homely factory, was presented as a means to stem worker unrest. Influenced by the ideals of scientific management, modernist architects believed that rationalizing space within factories could enhance efficiency by shaping social life and individual behavior within the premises, alleviating monotony and facilitating surveillance.¹³¹ The emergence of scientific management and the clinical modernist factory reflected a broader trend towards rationalization across medical and industrial practice, utilizing mass production to deliver standardized goods and services.¹³² While this efficiency-driven approach appealed more to managers preoccupied by profits than the holistic vision of domesticated factories promoted by welfare supervisors, many viewed the standardization inherent in scientific management as dehumanizing. In Charlie Chaplin's 1936 film *Modern Times* these sentiments were quite literally embodied as Chaplin's character, unable to maintain the pace of the production line, was pulled into the very cogs of the machine.

Industrializing the Home

The interest displayed by welfare supervisors in the home lives of their employees illustrates how the question of working-class housing linked to concerns with industrial productivity,

anxieties regarding social unrest, and the need for a healthy and efficient workforce. Although city boundaries had expanded in the two decades leading up to the First World War, the cost of transport compelled most industrial workers to rent accommodation close to work in crowded inner-city dwellings. Families living in tenements, back to back housing and multiple occupancy houses often only had one or two rooms in which to cook, eat, sleep and wash, and usually shared communal toilets and water supplies with other residents. In the two decades prior to the outbreak of the First World War, rental values escalated due to the rising demand for centrally located accommodation, prompting rent strikes in England and Scotland.¹³³ By 1918, the pre-war shortfall of 120,000 homes had leapt to 600,000, prompting the government to pass the 1919 Housing Act which compelled local authorities to provide housing.¹³⁴ Although 4 million new homes were built in Britain between 1919 and 1939,¹³⁵ post-war building schemes were stemmed by adverse economic circumstances, forcing many working-class families to live in slum housing.¹³⁶ As late as 1928, the Special Committee of the National Housing and Town Planning Council found that the state of slum housing had not improved since 1918, estimating that there were at least 1,000,000 unfit and 2,000,000 overcrowded houses.¹³⁷

One solution to this problem, closely aligned to the ethos of the homely factory, was the creation of garden cities. Another approach adopted by local authorities was the model of the cottage estate, advocated in the 1918 Tudor Walters Report.¹³⁸ Designed as quasi-rural estates with ample green space and low-density housing, the estates embodied the belief that space could be used to shape social behavior, promoting healthy living and calming discontent. The New Estates Community Committee, established in 1929, strove to promote “constructive leisure” on the new cottage estates, advocating educative entertainment and physical recreation to counteract ““machine-made and spoon-fed entertainments.””¹³⁹

Yet not all housing developments sought to recapture the rural idyll; in the interwar years, the government began to explore whether industrialization could help resolve the very housing crisis it had precipitated. The impetus in part came from experiments undertaken by industrial firms. In 1920, for example, Cadburys published an account of five experimental houses designed for workmen, expressing the hope that these experiments could assist the national housing problem. The designs included houses constructed from concrete blocks, bungalows fashioned from rammed earth and a wooden bungalow, built in sections within the works and bolted together on site. Unwilling to jettison its garden factory image, the firm planted creepers and rambling roses against the walls of its experimental houses in Bournville Village just as it had done when it expanded its production facilities.¹⁴⁰ Modernist architect Le Corbusier expressed a more radical assault on the traditional concept of the home, enthusiastically embracing the functionalist industrial aesthetic as a template for house design. A home, he argued, should be a receptacle for light and sun, containing “cells appropriated to cooking, work, and personal life.”¹⁴¹ What purpose, he asked, did the elaborate furnishings and décor so beloved of the nineteenth-century bourgeois domestic interior, serve?

If we eliminate from our hearts and minds all dead concepts in regard to the house, and look at the question from a critical and objective point of view, we shall arrive at the ‘House-Machine,’ the mass-production house, healthy (and morally so too) and beautiful in the same way that the working tools and instruments which accompany our existence are beautiful.¹⁴²

Given the financial constraints of the interwar years, models of house construction and design which drew upon industrial materials and mass-production methods proved appealing to government authorities. The 1924 Housing Act reduced the subsidy provided to local authorities for house construction if they rejected new building methods and materials. When the Conservatives were re-elected in late 1924, the new Minister of Health, Neville

Chamberlain, vigorously promoted research into innovative building methods. Chamberlain believed that a program of social reform was essential if social unrest was to be curbed and hoped to circumvent the demands of unionized building trades through recourse to prefabricated housing.¹⁴³ Between 1924 and 1925, a committee appointed by the Ministry of Health explored the possibility of using new materials in housing construction to save on time, money and skilled labor through mass-production methods. The Committee considered the feasibility of timber-framed houses faced externally with steel sheeting, steel frameworks and houses constructed in situ by pouring concrete between wooden or steel shutters.¹⁴⁴ The Committee also expressed an interest in the “factory production of houses,” through which materials could be pressed into moulds to form sections which could then be bolted together.¹⁴⁵

No more than 3,000 houses were constructed using these methods in the interwar years, but prefabricated methods featured prominently in plans for post-war reconstruction.¹⁴⁶ The Ministry of Health’s 1944 Report, *Design of Dwellings*, advocated a new standard of housing in terms of space, ventilation, noise, light, functionality and privacy. It recommended a standardization of fittings and equipment to facilitate mass production, bringing down costs and aiding replacement of parts. The Report also claimed that modern factories had transformed women’s expectations and had become templates for housing standards. While the First World War accelerated the domestication of the factory, the Second World War promoted the standardization of the home. “War-time factories and hostels often provide high standards of services and equipment, which will make such women intolerant of inferior conditions in their own homes,” explained the Report. “Both men and women have become conscious during the war of the potentialities of modern scientific developments and will expect to enjoy the benefit of these discoveries at home.”¹⁴⁷ The Report noted that the process of house construction was moving towards “a greater pre-assembly of parts of the house in the factory” and suggested that entire houses might yet be built in this way.¹⁴⁸

Mass production was not the only idea to cross over from the factory to the home. Architects and women’s groups were inspired by scientific management practices which, in the words of one contributor to Charles Myer’s *Industrial Psychology*, promised to “eliminate the wastes of energy due to the persistence of inefficient traditional methods of performing household tasks and to faulty planning and design of the home.”¹⁴⁹ These trends originated in America with the publication of Christine Frederick’s 1915 volume, *Household Engineering and Scientific Management in the Home*. Frederick heard about scientific management from her husband and subsequently visited factories to see how the system was implemented.¹⁵⁰ Such ideas rapidly took hold in Britain; a diagram published in the *Daily Mail* illustrated how a well-planned kitchen could enable afternoon tea to be made in fifty steps as opposed to 350.¹⁵¹ Clear parallels can be drawn between these developments and the preoccupations of the Industrial Fatigue Research Board, a joint venture between the Medical Research Committee and Department of Scientific and Industrial Research whose reports explored how fatigue could be reduced and efficiency enhanced by standardizing workers’ motions to exclude unnecessary action.¹⁵² One such report considered the fifty factors which must be known to calculate the efficiency of a bobbin winder, of which the average time required to have tea and the number of times tea was taken constituted factors forty-four and forty-five respectively.¹⁵³

The application of scientific management ideals to the performance of household tasks can be seen to exemplify the emergence of a conservative modernity in the interwar years.¹⁵⁴ The home became “the woman’s workshop,”¹⁵⁵ and the working-class housewife could be conceived of as a “quasi-professional worker,”¹⁵⁶ drawing status and satisfaction from her mastery of domestic science, electrical appliances and her role as home manager.¹⁵⁷ The

Ideal Home Exhibition helped popularize household technologies, arranging a competition in 1920 for the ideal labor-saving home; the winning design had easy to clean surfaces, grouped kitchen appliances together to minimize work and arranged the heights of the kitchen worktops to meet the requirements of a woman of average height.¹⁵⁸ It subsequently became common practice to justify the arrangement of rooms in reference to circulation routes round the house.¹⁵⁹

Indeed, while factory canteens had been one of the earliest features of the domestic factory, factory design appears in turn to have shaped the design of the domestic kitchen, fuelling a desire for rooms devoted to specific functions. Reading the 1918 Tudor Walters Report, which attempted to prescribe suitable models for new working-class housing, it becomes apparent that the notion of the kitchen was in flux. The Report commented on the desire for a living space separated from dirty work and the preparation of meals. It suggested that the tradition of a combined back kitchen and living room, which incorporated the cooking-range, sink and frequently the copper bath, was now outmoded.¹⁶⁰ Ellen Lupton and J. Abbott Miller summarized these developments in their comparison of factories and continuous kitchens in the 1930s, which enabled a series of chores to be undertaken seamlessly through “specialized work stations”; the only difference was that the labor expended led to the consumption rather than the production of goods.¹⁶¹ Throughout the 1930s, model kitchens were exhibited by women’s organizations to demonstrate the benefits of a well-designed kitchen space with fitted cupboards and worktops.¹⁶² A brief examination of the career trajectory of Dame Caroline Haslett, the Chairman of one of these organizations – the Council of Scientific Management in the Home – illustrates how industrial technologies and practices filtered into the domestic sphere over the course of the interwar years. Haslett’s career commenced in the industrial sphere: in 1919, she was appointed as Secretary to the Women’s Engineering Society. Haslett served as editor for the Society’s journal, *Woman Engineer*, until 1932 and was a member of the Industrial Welfare Society between 1923 and 1955. She began to apply industrial principles to household affairs in 1924, founding the Electrical Association for Women through which she advocated the use of electricity within the home. In 1927, Haslett invited Christine Frederick, the American pioneer of scientific management in the home, to give a series of lectures to the Electrical Association.¹⁶³

Conclusion

An exploration of the increasingly symbiotic relationship between factory and housing space offers a window into the social upheavals of interwar Britain. In 1918, when the fledgling *Boys’ Welfare Journal* sought to convince employers that the establishment of welfare facilities was both an economic and humanitarian imperative, the specter of industrial and social unrest haunted the government, middle-class reformers and industrialists. Trade union membership, which had stood at 2.5 million in 1910, spiraled to 6.5 million in 1918 and had reached 8.5 million by 1920. The government sought to dampen industrial unrest in 1915 by introducing compulsory arbitration. However, as revolution broke out in Russia in 1917, a series of strikes orchestrated by shop stewards working independently of the unions fuelled concerns that British factories would form the battleground for bitter industrial disputes and class conflict.¹⁶⁴ On the home front of this prospective industrial war, the government was faced with another potentially explosive situation as the housing shortage prompted overcrowding, soaring rents and slum living conditions. Against this backdrop, the welfare measures introduced by the government during the War to support industrial production and placate disgruntled workers proved attractive to employers. Practitioners of the nascent profession of welfare supervision, appointed by anxious industrialists, attempted to reconcile the nineteenth-century arts and crafts ideals with a new era of mass production by replicating aspects of the middle-class home within the factory. Mechanization was a

necessary evil which needed to be counter-balanced if man was not to become a mere cog in the machine.

The dialectical impulses of modernity and arcadianism, combined with anxieties about unruly and inefficient workers, led to a convergence of domestic and industrial space in the 1920s which brought into question the boundaries of public and private space. Advertisements straddled these antithetical images, enticing the domestic consumer with alternate images of “homely” factory produce and industrial technologies fit for the modern housewife. By the 1930s sleek modernist factories eclipsed Arcadian visions of the homely garden factory and the appeal of industrial welfare lost ground to the practices of scientific management and industrial psychology. The threat of industrial strife receded in the wake of the 1926 General Strike as the Trades Union Congress pursued a policy of modernization, seeking to effect political change through dialogue rather than confrontation.¹⁶⁵ Women’s social and economic opportunities expanded; policy makers, architects, advertisers and women’s groups embraced mechanization, mass-production methods and scientific management practices as liberating forces which could resolve housing problems and ease the burden of domestic labor within the home. In so doing, they reconfigured home space and workplace as mutually reinforcing rather than oppositional, blurring boundaries between public and private space.

With the passing of the 1937 Factory Act, provisions such as drinking water and washing facilities which had previously come under the ambit of voluntary welfare were now required in all factories. Maximum working hours were lowered and the Home Office was empowered to order medical supervision where it believed that working practices could damage health. It would be misleading, however, to assume that the model factories of the interwar years had paved the way for these reforms. Images of model factories proved a potent tool for advertisers but helped disguise disparities in working conditions in an era when aspirations for social reconstruction ran in tension with economic constraints. By suggesting that the well-being of industrial workers was primarily dependent upon healthy recreation, a home-like environment and nutritious food, the rhetoric of industrial welfare and the model homely factory offered employers a discourse through which to proclaim their interest in workers’ health while downplaying the risks posed by industrial disease and accidents, suggesting that responsibility for ill-health lay with the workers themselves.¹⁶⁶ It cannot be a coincidence that in 1928, as asbestosis began to attract attention in the medical press a year after the term was coined to describe the disease which killed an employee of Turner Brothers Asbestos Company, and the government commissioned a study of workers’ health in the asbestos textile industry, *Industrial Welfare* chose to lavishly showcase the firm’s model canteens, cloakrooms and sporting provisions, portraying Turner Brothers as a model employer.¹⁶⁷ Moreover, many British companies publicized the model working conditions enjoyed by their British employees while quietly exploiting their overseas labor force.¹⁶⁸ Employer organizations sought to keep health and welfare matters within the domain of industrial relations, advocating voluntarism as a strategy through which to evade government imposition of national standards via legislation or welfare regulations. In 1930, for example, the Inspectorate noted that the draft Safety in Factories Order remained in abeyance following assurances from employers’ associations that they would take up the matter of safety organization with their members.¹⁶⁹ Indeed, the opposition and intransigence of employer bodies successfully delayed the passing of the 1923 Factory Bill for fourteen years. ‘In view of the repeated attempts that have been and are being made by employers’ associations and similar bodies to secure the dropping, postponement, or toning down of the Factory Bill’, a 1927 TUC memorandum noted, ‘we think it necessary to restate with emphasis the reasons why it should be proceeded with immediately, and in a much stronger form’.¹⁷⁰ The high profile of model factories in the interwar years thus helped perpetuate poor working conditions. They created the illusion that voluntary provisions

could remove industrial health risks without the need for legislative intervention, diverted attention from the poor conditions pertaining in many factories and disguised the persistence of small factories, frequently more evocative of homely slums than modernist production sites.

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References

1. This was the official journal of the Industrial Welfare Society. It was first published in 1918 as the Boy's Welfare Journal, renamed the Journal of Industrial Welfare in 1920 and subsequently shortened to Industrial Welfare in 1922.
2. Ruskin, John. *The Nature of the Gothic*. First published in *The Stones of Venice*. 1853; 2Ruskin, John. Edition cited: *On Art and Life*. London: 2004. p. 16p. 14p. 19
3. Woodson-Boulton, Amy. *A Window onto Nature: Visual Language, Aesthetic Ideology, and the Art of Social Transformation*. In: Kang, Minsoo; Woodson-Boulton, Amy, editors. *Visions of an Industrial Age, 1830-1914: Modernity and the Anxiety of Representation in Europe*. Aldershot: 2008. p. 139-61. Woodson-Boulton, Amy. *Victorian Museums and Victorian Society*. *History Compass*. Jan; 2008 6(1):109–46. and Woodson-Boulton, Amy. 'Industry without Art is Brutality': Aesthetic Ideology and Social practice in Victorian Art. *Journal of British Studies*. Jan; 2007 46(1): 47–71.
4. Morris, William. *Work in a Factory as it Might Be*. Justice. May 17.1884 :2.
5. Cumming, Elizabeth; Kaplan, Wendy. *The Arts and Crafts Movement*. Vol. 7. London: 1991. p. 18Harvey, Charles; Press, Jon. John Ruskin and the Ethical Foundations of Morris & Company, 1861-96. *Journal of Business Ethics*. Mar; 1995 14(3):181–94.
6. Phillips, Simon. *Industrial Welfare and Recreation at Boots Pure Drug Company 1883-1945*. Nottingham Trent University; 2003. PhD diss.
7. For example, Annual Report of the Chief Inspector of Factories and Workshops for the Year 1911; 1912; p. 159Cd. 6293see also Annual Report of the Chief Inspector of Factories and Workshops for the Year 1913; 1914; p. 101Cd. 7491
8. Thomson, Mathew. *Psychological Subjects: Identity, Culture, and Health in Twentieth-Century Britain*. Oxford: 2006. Rose, Nikolas. *Governing the Soul: The Shaping of the Private Self*. London: 1999. Gabriel, Joseph M. *Mass-Producing the Individual: Mary C. Jarrett, Elmer E. Southard, and the Industrial Origins of Psychiatric Social Work*. *Bulletin for the History of Medicine*. 2005 Fall; 79(3):430–58. Eghigian, Greg; Killen, Andreas; Leuenberger, Christine. *The Self as Project: Politics and the Human Sciences in the Twentieth Century*. *Osiris*. Sep.2007 22:1–25.
9. The term "industrial warfare" was first used in *The Times* in 1876 in a report which asserted that as the trade unions had formed a federation it was time for the employers to do likewise, "for their own protection": "Employers and Trade Unions," *The Times*, 26 February 1876, 5. Use of the phrase peaked in *The Times* in the 1910s when it was used in 44 instances; the term was last used in the paper in 1920 (four mentions).
10. Littmann, William. *Designing Obedience: The Architecture and Landscape of Welfare Capitalism, 1880-1930*. *International Labor and Working-Class History*. 1998 Spring;53:88–114.
11. *Romance of Industry*. *Journal of Industrial Welfare*. Apr.1921 3:16.
12. Braybon, Gail. *Women War Workers in the First World War*. 1st ed.. London: 1989. 1981. chap. 4
13. Kent, Susan Kingsley, editor. *Making Peace: The Reconstruction of Gender in Interwar Britain*. Princeton: 1993.

14. Braybon. *Women War Workers*. p. 166-70. Thom, Deborah. *Nice Girls and Rude Girls: Women Workers in the World War 1*. 1st ed.. London: 2000. 1998. p. 142-53. Kent, Kingsley. *Making Peace*. p. 37-41. Woollacott, Angela. 'Khaki Fever and its Control: Gender, Age and Sexual Morality on the British Homefront in the First World War. *Journal of Contemporary History*. Apr; 1994 29(2):325-47.
15. Ministry of Munitions. *Report of the War Cabinet Committee on Women in Industry*. 1919. p. 80Cmd. 135
16. Ministry of Munitions. *Health of Munition Workers Committee Interim Report: Industrial Efficiency and Fatigue*. 1917. p. 2Cd. 8511
17. Ministry of Munitions. *Health of Munition Workers Committee Final Report*. 1918. p. 15Cd. 9065
18. Woollacott, Angela. *Maternalism, Professionalism and Industrial Welfare Supervisors in World War One Britain*. *Women's History Review*. 1994; 3(1):29-56.
19. *Annual Report of the Chief Inspector of Factories and Workshops for the Year 1918; 1919*. p. 43Cmd. 340
20. Woollacott. *Maternalism, Professionalism and Industrial Welfare Supervisors*. p. 38
21. Jones, Helen. *Women Health Workers: The Case of the First Women Factory Inspectors in Britain*. *Social History of Medicine*. 1988; 1(2):165-81. [PubMed: 11621946] and Livesey, Ruth. *The Politics of Work: Feminism, Professionalization and Women Inspectors of Factories and Workshops*. *Women's History Review*. 2004; 13(2):233-61.
22. Thom. *Nice Girls and Rude Girls*. p. 160
23. Beddoe, Deidre. *Back to Home and Duty: Women between the Wars 1918-1939*. London: 1989. Light, Alison. *Forever England: Femininity, Literature and Conservatism between the Wars*. London: 1991. Kent, Kingsley. *Making Peace*.
24. Bingham, Adrian. 'An Era of Domesticity'? *Histories of Women and Gender in Interwar Britain*. *Cultural and Social History*. May; 2004 1(2):225-33. Bingham, Adrian. *Gender, Modernity and the Popular Press in Inter-War Britain*. Oxford: 2004. p. 145-81.
25. Todd, Selina. *Young Women, Work and Family in England, 1918-1950*. Oxford: 2005. p. 20
26. Glucksmann, Miriam. *Women Assemble: Women Workers and the New Industries in Inter-War Britain*. London: 1990. p. 46-53. p. 54-6.
27. Long, Vicky; Marland, Hilary. *From Danger and Motherhood to Health and Beauty: Health Advice for the Factory Girl in Early Twentieth-Century Britain*. *Twentieth Century British History*. 2009; 20(4):454-81. [PubMed: 20481061]
28. On efforts to counter hazards posed to women's reproductive health see Harrison, Barbara. *Not only the "Dangerous Trades": Women's Work and Health in Britain, 1880-1914*. Abingdon: 1996. Malone, Carolyn. *Women's Bodies and Dangerous Trades in England, 1880-1914*. Woodbridge: 2003.
29. Cowan, Ruth Schwartz. *More Work for Mother: The Ironies of Household Technology from the Open Hearth to the Microwave*. New York: 1983. van Otterloo, Anneke. *The Rationalization of Kitchen and Cooking 1920-1970*. *Journal for the Study of Food and Society*. 2000 Spring;4(1):19-26. Nolan, Mary. 'Housework Made Easy': *The Taylorized Housewife in Weimar Germany's Rationalized Economy*. *Feminist Studies*. 1990 Autumn;16(3):549-77.
30. Apple, Rima D. *Perfect Motherhood: Science and Childrearing in America*. New Brunswick: 2006.
31. Cowan. *More Work for Mother*. Glucksmann. *Women Assemble*. p. 226-56.
32. Gutman, Marta. *Inside the Institution: the Art and Craft Settlement Work at the Oakland New Century Club, 1895-1923*. In: McMurry, Sally; Adams, Annmarie, editors. *People, Power and Places: Perspectives in Vernacular Architecture*. Knoxville: 2000. p. 284-79.
33. Van Slyck, Abigail A. *The Lady and the Library Loafer: Gender and Public Space in Victorian America*. *Winterthur Portfolio*. 1996 Winter;31(4):221-42.
34. Adams, Annmarie. *Rooms of Their Own: The Nurses' Residences at Montreal's Royal Victoria Hospital*. *Material History Review*. 1994 Fall;40:29-41. 37.
35. Prost, Antoine. *Changing Workers and Workplaces*. In: Prost, A.; Vincent, G., editors. *A History of Private Life V: Riddles of Identity in Modern Times*. Cambridge, MA: 1991. p. 9-49. p. 9

36. For a critical overview of the literature on separate spheres see Vickery, Amanda. *Golden Age to Separate Spheres? A Review of the Categories and Chronology of English Women's History*. *The Historical Journal*. Jun; 1993 36(2):383–414.
37. Neiswander, Judith A. *The Cosmopolitan Interior: Liberalism and the British Home 1870-1914*. New Haven: 2008.
38. Similarly, Annmarie Adams has argued that nurses' residences sought to ease women's pathways into work by evoking a sense of home while restricting nurses' autonomy: See Adams, "Rooms of Their Own."
39. For a helpful overview of the literature on the domestic interior and the porous boundaries between public and private space, see Hamlett, Jane. *The British Domestic Interior and Social and Cultural History*. *Cultural and Social History*. Mar; 2009 6(1):97–107.
40. Adams, Annmarie. *Architecture in the Family Way: Doctors, Houses, and Women, 1870-1900*. Montreal: 1996.
41. Donald, Moira. *Tranquil Havens? Critiquing the Idea of Home as the Middle-Class Sanctuary*. In: Bryden, Inga; Floyd, Janet, editors. *Domestic Space: Reading the Nineteenth-Century Interior*. Manchester: 1999. p. 103-120.p. 104
42. Purvis, June. *Hard Lessons: The Lives and Education of Working-Class Women in Nineteenth-Century England*. Padstow: 1989.
43. Modern Records Centre, University of Warwick (hereafter MRC), TUC Archive, MSS.292/140/1, 'Overcrowding in Domestic and Other Workshops', memorandum produced January 1924.
44. Buxton, Neil K.; Aldcroft, Derek H., editors. *British Industry between the Wars: Instability and Industrial Development 1919-1939*. London: 1979.
45. Glucksmann. *Women Assemble*.
46. Wolkowitz, Carol. *Bodies at Work*. London: 2006. p. 67
47. Sangster, Joan. *Earning Respect: the Lives of Working Women in Small-Town Ontario, 1920-60*. Toronto: 1995. Glucksmann. *Women Assemble*. The ideology of separate spheres also found spatial expression in office architecture. See Kwolek-Folland, Angel. *Engendering Business: Men and Women in the Corporate Office, 1870-1930*. Baltimore: 1994.
48. Annual Report of the Chief Inspector of Factories and Workshops for the Year 1929; 1930; p. 54Cmd. 3633
49. Annual Report of the Chief Inspector of Factories and Workshops for the Year 1933; 1934; p. 78Cmd 4657
50. Briggs, Lindy. *The Rational Factory: Architecture, Technology and Work in America's Age of Mass Production*. Baltimore and London: 1996.
51. Jones, Edgar. *Industrial Architecture in Britain, 1750-1939*. London: 1985. p. 76
52. Ibid; see also Stratton, Michael; Trinder, Barry. *Twentieth-Century Industrial Archaeology*. London: 2000. p. 1-17.
53. Jones. *Industrial Architecture*. Darley, Gillian. *Factory*. London: 2003. and Brockman, HAN. *The British Architect in Industry*. London: 1974.
54. Skinner, Joan. *Form and Fancy: Factories and Factory Buildings by Wallis, Gilbert & Partners, 1916-1939*. Liverpool: 1997. p. 264 See also Yeomans, David; Cottam, David. *Owen Williams*. London: 2001.
55. See McIvor, Arthur. *A History of Work in Britain, 1880-1950*. Basingstoke: 2001. p. 111-30. for an overview of occupational health from 1880 to the First World War.
56. Annual Report of the Chief Inspector of Factories and Workshops for the Year 1912; 1913. p. 150Cd. 6852
57. Squire, Rose. *Thirty Years in the Public Service: An Industrial Retrospect*. London: 1927. p. 45
58. Walkowitz, Judith. *City of Dreadful Delight: Narratives of Sexual Danger in Late-Victorian London*. 1st ed.. London: 1998. 1992. p. 52-61. and Prochaska, FK. *Women and Philanthropy in Nineteenth-Century England*. Oxford: 1980. especially chap. 4
59. Kerr CU. *Some Aspects of a Welfare Scheme*. *Industrial Welfare*. Sep. 1923 5:264–6. 264–5.

60. For a discussion of these trends in the nineteenth century see Adams. *Architecture in the Family Way*. for the twentieth century see Tomes, Nancy. *The Gospel of Germs: Men, Women and the Microbe in American Life*. Cambridge, MA: 1998. especially chap. 6
61. *Welfare in a Congested Area*. *Journal of Industrial Welfare*. Jul.1920 2:225–8. 227.
62. Photograph without parent article, captioned *Ambulance room of Mather and Platt, Ltd*. The large workshop can be seen through the window. *Industrial Welfare*. Nov.1924 6:365.
63. Walker, Lynne. *Home Making: An Architectural Perspective*. *Signs: Journal of Women in Culture and Society*. 2002; 27(3):823–35. Girouard, Mark. *Life in the English Country House: A Social and Architectural History*. New Haven and London: 1978. especially chap. 10
64. Ministry of Munitions. *Health of Munition Workers Committee Final Report*. Section IX: Food and Canteens; p. 51-61.
65. Ministry of Munitions. *Canteen Construction and Equipment*. 1916. Cd. 8199
66. Ministry of Munitions. *Health of Munition Workers Committee Final Report*. p. 54p. 56
67. *Ibid.*, 96, captioned “Counter Service.”
68. Collis, EL.; Greenwood, Major. *The Health of the Industrial Worker*. London: 1921. p. 267 Cited in Vernon, James. *Hunger: A Modern History*. Cambridge, MA and London: 2007. p. 166
69. Sloccock, E. Chapter 6: *Welfare*. *Annual Report of the Chief Inspector of Factories and Workshops for the Year 1933*; p. 78 By December 1941, 5,695 factory canteens were in operation: *Annual Report of the Chief Inspector of Factories for the Year 1943*. 1944. p. 60 Cmd. 6563
70. Cromley, Elizabeth. *Domestic Space Transformed, 1850-2000*. In: Ballantyne, Andrew, editor. *Architectures: Modernisms and After*. Oxford: 2004. p. 163-201. p. 176-77. and Neiswander. *The Cosmopolitan Interior*. p. 17
71. R.B.M. An ‘All-Electric’ Canteen. *Industrial Welfare*. May.1923 5:124–28. 124.
72. Neiswander. *The Cosmopolitan Interior*. p. 17 See also Girouard, Mark. *The Victorian Country House*. New Haven and London: 1979. p. 34-38.
73. Kerr CU. A Liverpool Scheme. *Industrial Welfare*. Jun.1928 10:185–87. 187.
74. Girouard. *Life in the English Country House*. p. 292-94. Neiswander. *The Cosmopolitan Interior*. p. 18
75. *The Employer’s Motive: What a Visit to Delectaland Revealed*. *Journal of Industrial Welfare*. Feb. 1920 2:40–44. 40.
76. Bourke, Helen. Pavy, Emily Dorothea (1885 - 1967). In: Nolan, Melanie, editor. *Australian Dictionary of Biography*. Vol. 11. Melbourne: 1988. p. 168-69. 16 Vols.
77. Proud, Dorothea. *Welfare Work: Employers’ Experiments for Improving Working Conditions in Factories*, with Foreword by David Lloyd George. London: 1918. p. 125
78. A New Scottish Welfare Building. *Industrial Welfare*. Oct.1926 8:335–39.
79. Library and Information Service. Cadbury Ltd Bournville. Cadbury Archives. *An Industrial Canteen: Catering Arrangements at Bournville*. Bournville: 1930. 334/002123
80. Photograph without parent article, captioned “a bathroom at the Letchworth factory of the Spirella Company (of Great Britain) United, where the employees work under ideal conditions,” *Industrial Welfare*. Jun.1923 5:159. For an overview of bathroom design see Lupton, Ellen; Miller, J. Abbott *The Bathroom the Kitchen and the Aesthetics of Waste: A Process of Elimination*. New York: 1992. p. 25-39.
81. Local Government Boards for England and Wales, and Scotland. *Report of the Committee to Consider Questions of Building Construction in Connection with the Provision of Dwellings for the Working Classes in England and Wales, and Scotland, and Report upon Methods of Securing Economy and Dispatch in the Provision of Such Dwellings*. 1918. p. 27 Cd. 9191
82. Rappaport, Erika Diane. *Shopping for Pleasure: Women in the Making of London’s West End*. Princeton: 2000. p. 74-107.
83. Hosgood, Christopher P. ‘Doing the Shops’ at Christmas: Women, Men and the Department Store in England, c. 1880-1914. In: Crossick, Geoffrey; Jaumain, Serge, editors. *Cathedrals of Consumption: the European Department Store, 1850-1939*. Aldershot: 1999. p. 97-115. p. 99
84. Queen. Jun 28. 1899 p. 138 Cited in Rappaport. *Shopping for Pleasure*. p. 94

85. Jenson and Nicholson Ltd. The Function of Colour in Factories Schools and Hospitals. London: p. 26-27.p. 20-21.n.d., circa 1940s?
86. Proud. Welfare Work. p. 97-98.
87. Ibid.
88. Miscellanea – Art in Factories. Journal of Industrial Welfare. Mar.1921 3:113.
89. Anynsley, Jeremy; Grant, Charlotte. Introduction. In: Aynsley, Jeremy; Grant, Charlotte, editors. Imagined Interiors: Representing the Domestic Interior since the Renaissance. London: 2006. p. 10-19.p. 14
90. Thom. Nice Girls and Rude Girls. chap. 8Woollacott. Maternalism, Professionalism and Industrial Welfare Supervisors.
91. Simon Phillips, for example, analyzed how Boots fostered a familial culture through industrial welfare: Phillips, “Industrial Welfare.”
92. Kerr CU. A New Model Factory. Industrial Welfare. May.1926 8:160–4. 160.
93. Nye, David. American Technological Sublime. Cambridge, MA: 1994.
94. Williams, Raymond. The Country and the City. London: 1973. p. 2
95. Chance, Helena. The Angel in the Garden Suburb: Arcadian Allegory in the ‘Girls’ Grounds’ at the Cadbury Factory, Bournville, England, 1880-1930. Studies in the History of Gardens and Designed Landscapes. 2007; 27(3):197–216.
96. Birmingham Central Library, Cadbury Family Archives, MSS.466/19, Cadbury, “The Factory in a Garden,” undated pamphlet c. 1910.
97. Cadbury Family Archives, MSS 466/20, undated brochure c. 1910s/1920s (a lecture intended to be shown with slides) “A Visit to Bournville Works,” 9-10.
98. Ward, Stephen V., editor. The Garden City: Past, Present and Future. London: 1992.
99. Kerr. A New Model Factory.
100. Ministry of Munitions. Health of Munition Workers Committee Final Report. p. 51-61.and Annual Report of the Chief Inspector of Factories for the Year 1943. p. 60
101. Annual Report of the Chief Inspector of Factories for the Year 1943; p. 57Annual Report of the Chief Inspector of Factories and Workshops 1918; p. 43
102. Annual Report of the Chief Inspector of Factories and Workshops for the Year 1919; 1920. p. 124Cmd. 941Until 1938, the Inspectorate listed separately the number of factories (distinguished by a supply of electricity) and the number of workshops. The 1919 figure includes 135,454 factories and 145,737 workshops.
103. Lee, John. The Principles of Industrial Welfare. London: 1924. p. 2Lee was the Controller of the Central Telegraph Office and the first Editor of the Journal of Public Administration.
104. Annual Report of the Chief Inspector of Factories and Workshops for the Year 1919; p. 87Annual Report of the Chief Inspector of Factories and Workshops for the Year 1925; Cmd. 2714; 1926; p. 96-98.
105. MRC, TUC Archive, MSS.292/142/1, “Industrial Medical Service (Factories),” statement of government policy sent by the Ministry of Labour and National Service to Vincent Tewson, 30 August 1948.
106. These cases were detailed in Industrial Welfare in the 1920s; for example, “When does Employment Cease?” 7 (March 1925): 281 and “Accident on the Way to Work – When does Employment Commence?” 8 (August 1926): 273.
107. Kerr CU. Welfare in a Lancashire Food Factory. Industrial Welfare. Apr.1925 7:130–34.
108. Annual Report of the Chief Inspector of Factories 1918. p. 53
109. Crawford, Margaret. Building the Workingman’s Paradise: The Design of American Company Towns. London: 1995.
110. Industrial Housing: Typical Smaller Schemes. Journal of Industrial Welfare. Jun.1921 5:157–60.
111. Life in Vickerstone – An Island Recreation Ground. How Barrow Workers are Housed. The Times. Aug 6.1918 :9.
112. Summers, Anne. A Home from Home: Women’s Philanthropic Work in the Nineteenth Century. In: Burman, Sandra, editor. Fit Work for Women. London: 1979. p. 33-63.

113. W S. The Problem of Home and Factory. *Industrial Welfare*. Jan.1922 4:25–26.
114. McArthur GF. Letter to the Editor. *Industrial Welfare*. Feb.1922 4:71.
115. Extra-Mural Welfare Issues. *Industrial Welfare*. Mar.1923 5:72–73. 73.
116. MacBride L. Letter to the Editor. *Industrial Welfare*. Mar.1922 4:117.
117. Glucksmann. Women Assemble. Cowan. More Work for Mother.
118. Article / advert for Crosse, Blackwell. *The Times*. Jun 8.1914 :4.
119. Adams, Annmarie. *Medicine by Design: the Architect and the Modern Hospital, 1893-1943*. Minneapolis: 2008. p. 109
120. For example, advertisements placed by Chivers & Sons in *The Times* on 24 March 1925, 24 and 9 September 1925, 15; advertisements placed by J. Lyons & Co on 8 January 1925, 16; 5 February 1925, 17 and 7 May 1925, 19; advertisement placed by Ovaltine in *The Times* on 16 February 1933, 8.
121. Advertisement, Ovaltine, *The Times*, 11 January 1926, 16.
122. Proud. *Welfare Work*. p. 108-09.
123. Bartlett, Peter. *The Asylum and the Poor Law: the Productive Alliance*. In: Melling, Joseph; Forsythe, Bill, editors. *Insanity, Institutions and Society, 1800-1914*. London: 1999. p. 48-67. Yanni, Carla. *The Architecture of Madness: Insane Asylums in the United States*. Minneapolis: 2007.
124. Nye. *American Technological Sublime*. p. 127-31. These developments were more marked in America: twenty five people were employed full time to take visitors round the Ford Highland Park Plant.
125. Beeston, Boots Company Archive, “Guide Handbook for the Beeston Factory,” undated c. 1950s.
126. Advertisement, the British Commercial Gas Association. *The Times*. Oct 18. 1929 p. 9
127. Advertisement, the British Electrical Development Association. *The Times*. Nov 29.1938 :8. Italics in original text.
128. Advertisement, the Gas Light & Coke Company. *The Times*. Nov 9.1927 :6. Italics in original text.
129. On new materials and factory construction, see Stratton; Trinder. *Industrial Archaeology*. p. 7-14.
130. For a description of the Boots factory design see Darley. *Factory*. p. 122-28.
131. Guillen, Mauro F. *The Taylorized Beauty of the Mechanical: Scientific Management and the Rise of Modernist Architecture*. Princeton: 2006. p. 33-44.
132. Sturdy, Steve; Cooter, Roger. Science, Scientific Management, and the Transformation of Medicine in Britain C. 1870-1950. *History of Science*. Dec; 1998 36(3):1–47.
133. Melling, Joseph; Strikes, Rent. *Peoples’ Struggle for Housing in West Scotland 1890-1916*. Edinburgh: 1983. Englander, David. *Landlord and Tenant in Urban Britain 1838-1918*. Oxford: 1983. p. 193-233.
134. Swenarton, Mark. *Homes Fit for Heroes: The Politics and Architecture of Early State Housing in Britain*. London: 1981. p. 67-87.
135. Miller, Helen. *Housing and Town Planning, 1900-1939*. In: Wrigley, Chris, editor. *A Companion to Early Twentieth-Century Britain*. Oxford: 2003. p. 388-404.p. 399
136. Discussed in Beddoe. *Back to Home and Duty*. :89–95.
137. Special Committee of the National Housing and Town Planning Council, *A Policy for the Slums*. 1929. quoted in Burnett, John. *A Social History of Housing 1815-1970*. 1st ed.. London: 1983. 1978. p. 237
138. See Bayliss, Darrin. *Building Better Communities: Social Life on London’s Cottage Council Estates, 1919-1939*. *Journal of Historical Geography*. Jul; 2003 29(3):376–95.
139. British Association of Residential Settlements. *Annual Report: 1934-1935*. London: 1935. Introduction. tocited in Bayliss. *Building Better Communities*. p. 384
140. Cadbury Family Archives. *Experimental Houses, Hay Green Lane, Bournville*. Bournville: 1920. p. 4MSS 466/20, Cadbury Brothers
141. Corbusier, Le. *Towards a New Architecture*. Mineloa: 1989. p. 1141923 William Whyte identifies 1927 – the year in which Corbusier’s book was first translated into English - as the year in which

modern architectural movement began to emerge within England. See Whyte, William. The Englishness of English Architecture: Modernism and the Making of a National International Style, 1927-1957. *Journal of British Studies*. Apr; 2009 48(2):441–65. See also Powers, Alan. The Modern Movement: 1920-1950. In: Calloway, Stephen, editor. *The Elements of Style: an Encyclopedia of Domestic Architectural Detail*. London: 1996. p. 448-69.

142. Corbusier, Le. *Towards a New Architecture*. p. 6-7.
143. Swenarton, Mark. *Houses of Paper and Cardboard: Neville Chamberlain and the Establishment of the Building Research Station at Garston in 1925*. *Planning Perspectives*. Jul; 2007 22(3):257–81. The clauses in the 1924 Act passed by the Labour Party which penalized local authorities for refusing to use modern methods had been tabled as amendments by Chamberlain.
144. Ministry of Health. *Committee on New Methods of House Construction: Interim Report*. London: 1924. *Second Interim Report of Committee on New Methods of House Construction*. 1925. Cmd. 2310 *Third Interim Report of Committee on New Methods of House Construction*. London: 1925. Cmd. 2334
145. *Third Interim Report*. p. 7
146. White, RB. *Prefabrication: A History of its Development*. 1965. p. 60 Discussed in Herbert, G. *The Dream of the Factory-Made House: Walter Gropius and Konrad Wachsmann*. Cambridge, MA and London: 1984. p. 20-21. See also Finnimore, Brian. *Houses from the Factory: System Building and the Welfare State 1942-74*. London: 1989. p. 26-47.
147. Ministry of Health. *Design of Dwellings: Report of the Design of Dwellings Sub-Committee Appointed by the Ministry of Health and Report of a Study Group of the Ministry of Town and Country Planning on Site Planning and Layout in Relation to Housing*. London: 1944. p. 10
148. *Ibid.*, 27.
149. Lane, FW. *The Economic Aspects of Industrial Psychology*. In: Myers, CS., editor. *Industrial Psychology*. 1st ed.. Oxford: 1944. 1929. p. 219-30. p. 226
150. Freeman, June. *The Making of the Modern Kitchen: A Cultural History*. Oxford: 2004. p. 30
151. Ryan, Deborah S. *The Ideal Home through the Twentieth Century*. London: 1997. p. 38
152. For example, Farmer, E. *Industrial Fatigue Research Board Report No. 14: Time and Motion Study*. London: 1923.
153. Wyatt, S. *Industrial Fatigue Research Board Report No. 8: Some Observations on Bobbin Winding*. London: 1920. p. 21
154. See Light. *Forever England*.
155. Beddoe. *Back to Home and Duty*. p. 89
156. Giles, Judy. *A Home of One's Own – Women and Domesticity in England 1918-1950*. *Women's Studies International Forum*. May-Jun; 1993 16(3):239–53. 245.
157. Bourke, Joanna. *Housewifery in Working-Class England 1860-1914. Past and Present*. May. 1994 143:167–97. Giles. *A Home of One's Own*.
158. Ryan. *The Ideal Home*. p. 34 The 1884 International Health Exhibition set a precedent for later exhibitions, although the displays on housing emphasized health and hygiene rather than utility and convenience. Adams. *Architecture in the Family Way*. especially chap. 1
159. Aynsley, Jeremy. *Imagined Interiors. Displaying Designs for the Domestic Interior in Europe and America, 1850-1950*; p. 190-215. p. 205-07.
160. *Provision of Dwellings for the Working Classes in England and Wales, and Scotland*. p. 25
161. Lupton; Miller. *The Bathroom and the Kitchen*. p. 41-64. p. 41
162. *The Place of Home: English Domestic Environments, 1914-2000*. London: 1995. p. 157-58. Alison Ravetz with Richard Turkington
163. This group came into being in 1931, when a committee of women formed to prepare a paper for the Fifth International Management Congress on aspects of scientific management in the home. The Council operated throughout the 1930s and was revived after the Second World War. Its records are held in the archives of the Women's Forum at the Women's Library, London. On Haslett, see Law, Cheryl. *Women: a Modern Political Dictionary*. London: 2000. p. 78-79. and Vernon. *Hunger*. p. 220
164. Hinton, James. *The First Shop Stewards' Movement*. London: 1973.

165. Taylor, Robert. *The TUC: From the General Strike to New Unionism*. Houndmills: 2000. especially chap. 1
166. Discussed in more detail in Long, Vicky. *The Rise and Fall of the Healthy Factory: The Politics of Industrial Health in Britain, 1914-60*. Houndmills: 2010. chapters 2 and 3
167. Kerr CU. *Welfare Work in a Lancashire Asbestos Factory*. *Industrial Welfare*. Apr.1928 :109–14. On Turner Brothers, see Tweedale, Geoffrey. *Magic Mineral to Killer Dust: Turner & Newall and the Asbestos Hazard*. Oxford: 2000. p. 11-22.
168. See, for example, Lewis, Brian. ‘So Clean’: Lord Leverhulme, Soap and Civilization. Manchester: 2008. especially chap. 4 and Robertson, Emma. *Chocolate, Women and Empire: A Social and Cultural History*. Manchester: 2009. p. 9p. 120-22.
169. Annual Report of the Chief Inspector of Factories and Workshops for the Year 1930; 1931. p. 11Cmd. 3297 This point has also been made by Helen Jones: Jones, Helen. *Employers’ Welfare Schemes and Industrial Relations in Inter-War Britain*. *Business History*. Mar; 1983 25(1):61–75.
170. TUC Archive, MSS.292C/140/1, TUC Research Department, Legge “Factories Bill,” typescript dated 1 February 1927.

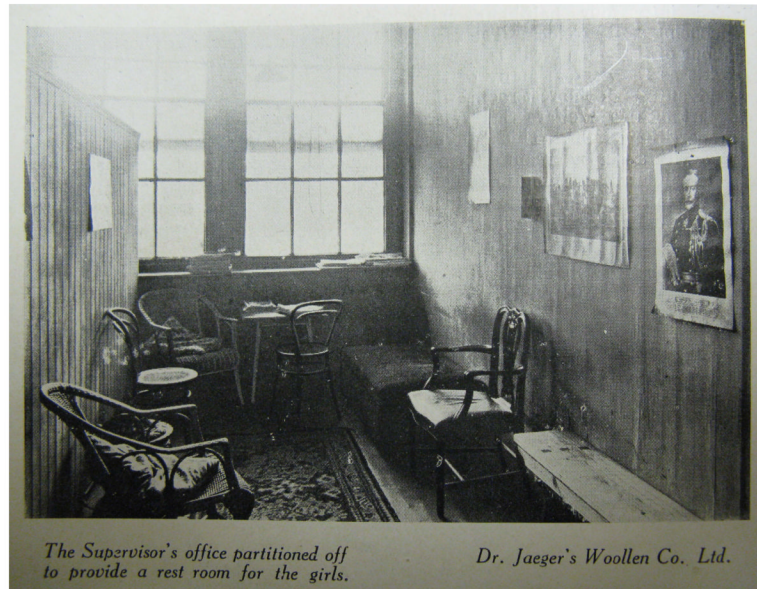


Image 1.

Rest room, Dr Jaeger's Woollen Company. "Welfare in a Congested Area," Journal of Industrial Welfare 2 (July 1920): 225-8.



Image 2.
“Counter Service.” Ministry of Munitions, Health of Munition Workers Committee Final Report, Cd. 9065 (1918), 96.



Image 3.

Girl's Club Room. "The Employer's Motive: What a Visit to Delectaland Revealed," Journal of Industrial Welfare 2 (February 1920): 40-44; 40.

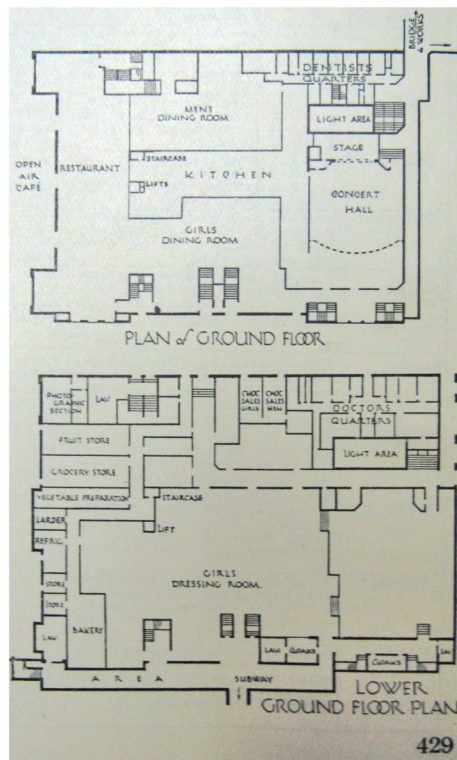


Image 4.

Plan of lower and ground floor of Cadburys' canteen block. Library and Information Service, Cadbury Ltd Bournville, Cadbury Archives, 334/002123, An Industrial Canteen: Catering Arrangements at Bournville (Bournville, 1930), 14.



Image 5.

Photograph captioned “a bathroom at the Letchworth factory of the Spirella Company (of Great Britain) United, where the employees work under ideal conditions,” Industrial Welfare 5 (June 1923): 159.